WEAPONS OF MASS DESTRUCTION:

COLD WAR LESSONS FOR A NEW WORLD ORDER

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EXECUTIVE SUMMARY:

The end of the Cold War reduced the threat of a nuclear war between the superpowers. However, global relief quickly gave way to concern over a new if less dramatic danger: the tinder box of potentially explosive regional conflicts resulting from uncontrolled spread of weapons and delivery systems of mass destruction, particularly in the developing world.

A number of mechanisms have been established to handle specific technologies related to weapons of mass destruction, and especially to the spread of non-conventional weapons. They form, at best, a patchwork of controls rather than a cohesive framework. In particular, the new arrangements do not fully address the difficult area of transfer of dual use technologies which may be necessary to produce and support these weapons systems.

The Coordinating Committee on Multilateral Export Controls (COCOM) has over forty years of experience in attempting to slow the flow of dual use technology to the former Soviet Union and its allies. Although COCOM was designed and used as a Cold War instrument to control militarily sensitive East-West trade and never as a non-proliferation regime, the COCOM experience can still provide valuable insights into the problems associated with any North-South technology transfer control mechanism.

Lessons learned from COCOM include: the importance of correctly assessing an item's "controllability" ; the difficulties in maintaining controls as production sources spread; the problems of third country player sensitivities; and the inevitable need to

factor legitimate commercial considerations into the final equation.

These COCOM lessons highlight the difficult problems associated with controlling trade in dual use sensitive technologies. Equally important, they underline the limited objectives that could reasonably be associated with any North-South export control regime established to limit such trade.

The broader COCOM experience suggests that efforts focussed on controlling the spread of technologies needed to produce and support non-conventional weapons and delivery systems must ultimately be interim measures. They may slow but cannot stop the spread of capabilities for mass destruction.

Long term solutions must address underlying causes of political instability. These root causes can only be attacked through the spread of democratic institutions, political openness, and greater global and regional cooperation.

Given the magnitude of the real task – creation of a new world order – and the difficult, perhaps insurmountable, problems associated with establishing controls that ameliorate rather than exacerbate the problem, it is tempting to walk away even from discussing new multilateral export control efforts. Interim controls at best just buy time.

However, COCOM's history does add one last tantalizing lesson to the debate. Sometimes, despite the odds and in the face of all reasonable predictions of the future, the world can buy enough time.

The rocket goes up, who knows where it comes down,
That's not my department, said Werner von Braun. Anon 1950s

WEAPONS OF MASS DESTRUCTION: The Evolving Problem

The New Russian Threat:

The displaced German scientist was a post-war film cliche, abetting cinematic dictators in their efforts to rule the world. In reality, while some of Germany's scientific elite did turn up in unusual places, many of the most prestigious scientists – those who helped construct German military might – were spoils of war, too valuable to go on the open market. Many ended up behind the Iron Curtain. The lucky ones made it to the West where they often made significant scientific contributions to post-war Western society.

The collapse of the former Soviet Union has begun to produce new but similar concerns. Starving Soviet scientists, long accustomed to lives of privilege in sheltered enclaves, are now desperately struggling to survive. They could soon be lured away by Third World countries seeking regional if not global hegemony.

This new scenario may be more of a threat than the post–war clones of Dr. Strangelove. The former Soviet Union diverted enormous sums over decades to create a scientific state within a state. As a result, the number of scientists and technicians with "marketable" skills is immense. By one estimate, as many as 700,000 people may have worked in the tightly controlled Soviet

nuclear weapons industry alone, and 2000 to 3000 may have had access to the most sensitive material[1].

Further, the Cold War was won without a shot being fired. No victorious occupying armies swept through as the facade crumbled to collect the best and brightest for new, more positive employment.

Finally, because the Soviet collapse was both political and economic, the emerging new republics are themselves desperate for hard currency. To republican governments scrambling for cash, Third World purchasers are a tempting market. In February, 1992, leaders of the Russian republic, including Russian President Boris Yeltsin, announced that Russia's weapons factories – once targeted for immediate conversion – would continue arms production and global sales to earn foreign exchange and avoid short-term domestic economic disruption[2].

If weapons, excess military equipment, knowledge and skills of the former Soviet republics are dumped on the world market, they will allow developing countries greater access to the high technology needed to build, maintain and ultimately employ weapons of mass destruction. Countries now attempting to develop such weapons could have easier access to equipment and components and might even be able to obtain end products and/or production facilities without going through the lengthy process of training, education, research and development.

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[1]"A Nice Red Afterglow," *Economist*, 14 March 1992: 45.

[2]Fred Hiatt, "Russia Boosts Weapons Sales To Aid Economy," *Washington Post* 23 Feb. 1992, final ed.: A1.

This real problem must be addressed. Confusion, want and despair make the former Soviet scientific elites and their struggling nascent governments tempting targets of opportunity for Third World bargain hunters.

The West has already begun to respond. The United States has offered $400 million to assist the Soviet Union in dismantling its nuclear weapons (admittedly a multi-billion dollar job.)[3] In February, 1992, Secretary of State Baker, German Foreign Minister Genscher and Russian Foreign Minister Kozyrev issued a tripartite statement calling for creation of an international Science and Technology Center in Russia to employ the talents of former Soviet scientists and engineers.[4]

But the high-profile dangers created by the Soviet collapse must not distract attention from a wider, less dramatic, (and perhaps more difficult) threat. Even if the United States and Western Europe were to buy every missile and warhead and employ every scientist and technician in the former USSR, it would only close the doors of one potential (if vast) supermarket of destruction. It would not shut down the growing global bazaar.

The Broader Problem

The bazaar has been open since David bought his slingshot. Innovation changes the face of war. The secret of the long bow,

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[3]"Afterglow," 45.

[4]Department of State, unclassified cable, State 54480 of 22 February 1992.

Greek fire, or the atom bomb can spell victory against a superior force. This provides a strong incentive to guard new technology – and an equally strong or stronger incentive to gain access to it.

However, sales in non-conventional weapons of mass destruction do seem to be picking up. According to the Aspen Strategy Group, 12 Third World countries probably already have chemical weapons: Burma, China, Egypt, Ethiopia, Iran, Iraq (known), Israel, Libya, North Korea, Syria, Taiwan and Vietnam.[5]

While less open source data are available on nuclear weapons, Third World countries cited in the press as possibly having or pursuing nuclear weapons capability include: Iraq, North Korea, Israel, South Africa, India, Pakistan, Brazil and Argentina. The list may well be longer.

Delivery systems are also widespread. According to the Stockholm International Peace Research Institute, at least 22 countries have active ballistic missile programs, and 17 have actually deployed ballistic missiles.[6]

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[5]*Finding Common Ground*, 58.

[6]James Adams, "Arms and the Salesmen," *Washington Post* Jan 27 1991, final ed: C1.

AD HOC SOLUTIONS: Pieces of the Patchwork

The Australian Group

Some steps have already been taken to help curb the spread. In 1985, in response to an Australian initiative, the "Australian Group" was formed (initially Australia, Canada, Japan, New Zealand, the United States and the European Community, now expanded to include 22 countries.) The Australian Group attempts to halt the flow of chemical and biological weapons and harmonize export controls of chemical agents, precursors and equipment. The Group has drawn up a list of chemicals commonly used in the production of chemical weapons. Eight now require export licenses in member states and 30 more are on a "watch list" to provide early warning that a country may be attempting to develop chemical weapons.

The Group is useful as a standard setter and critical information resource. It is also an effective source of moral suasion to prevent lapses by members and non-members. The Group's chief weaknesses are lack of an enforcement mechanism and a non-binding decision-making process[7]. Most chemicals have peaceful dual uses, and there are no sanctions against Group members who export chemicals to countries that the Group fears may be for chemical weapons use. (For example, Germany, a charter member of the Group, was warned by the U.S. and Britain that Libya was building a chemical weapons plant at Rabta; Germany chose – along

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[7]Senator John Heinz, *US Strategic Trade: An Export Control System for the 1990s* (Boulder: Westview Press, 1991), 141.

with France, Italy, and Japan – to ignore the warnings and continue to export chemicals to Libya for over a year.[8])

The Missile Technology Control Regime

In 1987, the Missile Technology Control Regime (MTCR) was established to limit the spread of technology that could help non-nuclear countries develop ballistic missile capabilities. It has grown since then from its initial seven members (the US, Canada, Britain, France, Germany, Italy and Japan) to 19 MTCR member countries.

The MTCR commits member countries to halt export of technology and equipment that could help countries acquire missiles capable of carrying a 105 pound warhead more than 186 miles.[9] It is a multilaterally agreed set of principles with no target countries singled out and no sanctions to guarantee enforcement.

The Nuclear Non-Proliferation Treaty

The Nuclear Non-Proliferation Treaty commits nuclear states not to assist non-nuclear-weapon states to acquire nuclear weapons and commits non-nuclear signatories not to receive such assistance. The commitment of nuclear states is reenforced through the Non-Proliferation Treaty Exporters Committee (Zangger Committee), which works closely with the International Atomic Energy Agency. A second group, the Nuclear Suppliers Group, is not connected to the

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[8]Adams, 1.

[9]Heinz, 138.

NPT but also works on the basis of "trigger lists" based on IAEA safeguards.

Gaps in the Net

In sum, there are a number of current controls on transfer of technology relating to proliferation of weapons of mass destruction. However, they form less of a framework for control than a patchwork - one often without penalties to control suppliers.

Further, these mechanisms concentrate primarily on specific military technologies. Much of the remaining technology involved in systems to produce and employ weapons of mass destruction - primarily "dual use" technology, which has both peaceful and military applications - can slip through the existing net.

For over 40 years, the United States has attempted to control the spread of militarily sensitive technology to the Soviet Union and other Communist states. During this period, the multilateral coordinating committee known as COCOM has been the central forum for coordinating the multilateral effort to control the East-West transfer of dual use technology.

Working for the most part in a peacetime setting and drawing on the resources of both governments and industry, COCOM has addressed difficult dual use technology transfer issues in the Cold War context of East-West trade. The effort has been marked by frequently heated debate, controversy and soul-searching among COCOM member governments, domestic producers and sellers, and within the U.S. government.

COCOM was designed solely as a mechanism to control the flow of sensitive technology to the Soviet Union and its allies. It was not and was never intended to be a non-proliferation regime. However, COCOM does represent the major multilateral post war effort to coordinate producer country export controls on dual use technology sales.

America's COCOM experience may provide clues on how and whether to attempt to expand controls on North-South transfer of dual use sensitive technology. It may also shed light on the role, if any, that such a regime might play in a broader North-South effort to limit the spread of production and use of weapons of mass destruction. At a minimum, drawing on more than 40 years of COCOM work, it should be possible at least to identify potential pitfalls in efforts to control dual use North-South high technology trade.

THE COCOM EXPERIENCE: A Cold War History

The New World Order of 1945

The role of governments in controlling technology transfer has evolved over time. U.S. export controls can be traced back to the 1917 Trading with the Enemy Act, which authorized the President to restrict export of munitions.[10] However, the watershed in U.S. export control policy came in 1947, when the United States extended export controls to cover national security concerns.[11]

This new departure came at a time when the United States had a virtual monopoly over state-of-the-art weaponry. Ultimately, America could not bottle up the genie of Los Alamos. However, it was still possible to try to maintain the U.S. (and gradually Western) technological edge over the Soviet Union and Warsaw Pact. Rather than fight "man for man and tank for tank," the West hoped to use superior technology to contain the Soviet threat.

To achieve a permanent advantage, the U.S. had to deny the Soviet Union and its allies access to militarily significant technology. The Truman administration sought selective multilateral export controls by Marshall Plan countries, using the U.S. Special Representative of the Economic Cooperation Act to urge "parallel action on the basis of U.S. security lists."[12]

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[10]Heinz, 7.

[11]Heinz, 9.

[12]Heinz, 46.

Negotiating leverage is always difficult to assess because it requires subjective measures. However, the United States - strengthened from the War, a donor country, the monopoly holder of key technology and resources, and Europe's only protector against Stalinist Russia - undoubtedly held a good hand. The war torn Marshall Plan recipient countries were in no position to deny the United States what it wanted, particularly when the stated U.S. objective was protection of mutual Western security interests.

In 1949, the United States, the United Kingdom, Italy and the Benelux countries agreed to create an informal consultative group to coordinate domestic controls on transfers of sensitive dual use technology.[13] In 1950, they formed an informal, voluntary organization which would make such export control decisions based on consensus; the day to day tasks of coordinating multilateral controls; overseeing enforcement; and recommending improvements would be done by a Coordinating Committee, known as COCOM[14]. Over time, COCOM membership expanded to include all NATO countries (except Iceland) as well as Australia and Japan.

Unlike many other post-war institutions, COCOM had no empowering treaty. No sanctions were included in COCOM's mandate to discipline members who failed to live up to their voluntary commitments. Neither were there provisions for international arbitration in cases where members disagreed over interpretation of

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[13]Heinz, 46.

[14]Heinz, 46.

a COCOM decision. Members would restrict exports based on national legislation, coordinated but not governed by COCOM.

COCOM: The Search for Consensus

Over the years, COCOM's strength - and weakness - has been that it must depend upon commonly shared perceptions of the security threat to achieve its objectives. Exports of sensitive dual use technology to the Soviet Union, the Warsaw Pact and China are restricted based on three COCOM lists: the International Munitions List (ILM - military items); the International Atomic Energy List (IAEL - nuclear items); and the Industrial List (IL - dual use industrial items)[15]. COCOM does not construct the lists independently but rather depends upon member country submissions.

Consensus has always been relatively high on munitions and nuclear export controls lists. Industrial dual use export controls, that is, controls on exports of items such as computers, which can have broad commercial as well as military applications, has been more controversial[16]. That controversy has colored COCOM's performance and to a large extent been at the heart of the decades-long debate within COCOM.

It can be argued that the core of the debate centers on defining COCOM's role. In 1969, during hearings on the 1949 Export

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[15]National Academy of Sciences, Committee on Science, Engineering and Public Policy, *Finding Common Ground: U.S. Export Controls in a Changed Global Environment* (Washington: National Academy Press, 1991), 65.

[16]Heinz, 9.

Control Act, Representative Thomas Ashley charged the United States had a "compulsive tendency" to regard denial of trade with Communist regimes *per se* as a primary Cold War weapon while America's Allies were satisfied to use COCOM to control only strategic trade[17]. In contrast, many Europeans argued that trade should be seen as a stabilizing element in the East-West relationship, to be restricted only for military reasons[18].

The two views might be summed up as "not selling the enemy the rope to hang us," where there was fairly widespread Western agreement, and "no business as usual with Communists," which could arguably be broader than strategic trade and lead to a wider interpretation of militarily sensitive goods. In short, while the Allies were – more or less – agreed on the objective, the devil was in the details.

COCOM: The Changing Global Environment

The details became more complicated over time. Initially, the United States had a whip hand. With a strong technological lead, the U.S. could demand (and enforce) extraterritorial controls on use of American-origin technology. Western allies had little choice but to play by U.S. rules.

Further, in the early post-war period, compared to other COCOM members, the U.S. earned a very small percentage of its GNP from

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[17]Heinz, 15.

[18]Hanns-Dieter Jacobsen, "European Perspectives" *Export Controls in Transition*, 73.

foreign trade; and - again in contrast with most COCOM allies – the U.S. had few historic trade links with the East[19]. These factors may have encouraged pre-existing U.S. tendencies to take a more conservative approach to the COCOM list.

The informal structure of the COCOM system probably kept the lid on inter-ally tensions. While items could be added or deleted from the COCOM list only by unanimous consent, individual countries were responsible for interpretation and enforcement of the controls domestically.[20] This led to disparities among the behavior of COCOM members. In addition, the United States was free to maintain its own domestic export controls list, which generally covered more products and technologies.[21]

Over time, the economic environment changed. As Western Europe and Japan recovered, the U.S. lead dwindled and disappeared. And as the global market place expanded, foreign trade became more important for the United States.

To function effectively, COCOM depends upon close cooperation with domestic industry to help identify and interpret the strategic value of emerging technologies. By the late 1960s, U.S. firms were complaining that stringent U.S. enforcement of unilateral and multilateral export control and uncertainties in the U.S. export

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[19]Paul Freedenberg, "The Commercial Perspective," *Export Controls in Transition: Perspectives, Problems and Prospects* (Durham: Duke University Press, 1992) 38.

[20]Richard T. Cupitt, "The Future of COCOM," *Export Controls in Transition*, Gary K Bertsch and Steven Elliott-Gower, eds., (Durham: Duke University Press, 1992) 234.

[21]Freedenberg, 40.

control policies related to interpretation of the lists were curtailing U.S. export efforts.[22]

The debate over the impact of COCOM export controls on U.S. industry continues. U.S. companies continue to believe U.S. and COCOM export controls place them at a disadvantage because of stricter U.S. interpretation and enforcement while Allied firms argue that the U.S. uses its domination of COCOM to tailor controls to benefit U.S. companies.[23] According to a 1987 National Academy of Science study, U.S. export controls cost the United States $9.3 billion in lost profits on exports and foreign sales and 188,000 jobs; no comparable figures were provided for other COCOM members.[24]

U.S. commercial concerns and *detente* led to some relaxation of COCOM controls in the 1970s[25]. During that period, the United States took a strong lead in requesting "exceptions" to the COCOM embargo list, a practice that ended abruptly in 1979 with the Soviet invasion of Afghanistan.[26]

The return to a tough "no exceptions" U.S. policy in the 1980s was played out against a new global environment. The United States was no longer the only reserve of high technology. In 1982, the U.S. moved to block the European sale of gas pipeline equipment

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[22]Heinz, 15.

[23]MacDonald, 117.

[24]Heinz, 4.

[25]Freedenberg, 39.

[26]Freedenberg, 39-40.

based on U.S. origin technology to the Soviet Union. One Allied response to U.S. extraterritorial reach was "de-Americanization" of foreign products, with U.S. parts used only as "a last resort.[27]"

COCOM: The Challenge of The Global Economy

The desire to be free of constraints from U.S. – and all Western – technology controls may have also helped drive developing country efforts to develop indigenous technologies. In any case, by the 1980s, the number of source countries for dual use technology had expanded well beyond the limits of COCOM membership.

The question of "foreign availability" was always difficult for COCOM[28]. If the same product could be obtained on the world market from a non-COCOM member, the COCOM countries were only hurting themselves, their domestic industries, and ultimately their technological base by continuing to restrict sales. However, agreement on derestriction of an item based on global availability could be difficult to achieve since it involved judgments on the "comparability" of the non-COCOM products[29].

Further, there was just too much technology out there. In a "Computers R Us" world, borders became even more porous. And while some technology slipped through could be obtained at Radio

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[27]Freedenberg, 47.

[28]Cupitt, 241.

[29]COCOM had difficulty agreeing to decontrol IBM AT or AT compatible computers despite evidence of production in seven non-COCOM countries. (Cupitt, 241)

Shack, the West was also suffering some heavy losses, particularly in the case of Toshiba Kongsberg.

One answer was to get tougher domestically in COCOM countries. As a result of embarrassment to the Japanese government and the damage to Japan-U.S. relations caused by the Toshiba Kongsberg sale of COCOM-proscribed numerically controlled, multiaxis milling machines to the Soviet Union, the Japanese government expanded the staff of the lead agency in charge of Japan's export regime from 43 to 106 and beefed up customs enforcement[30]. As a result of these and other changes, according to some estimates, Japan may now be America's best COCOM partner[31].

Another response was to expand the number of countries committed to playing by COCOM rules. In 1984, the United States attempted to tighten up on third country diversion and bring in more non-COCOM producers through a Third Country Initiative. Improved access to COCOM technology would be available to non-COCOM members in exchange for agreement to protect both COCOM and indigenous technology. Third Country Cooperation (TCC) has had limited success, since few COCOM countries have actively pursued TCC agreements, agreements negotiated do not systematically cover all COCOM-controlled goods and cooperating countries have been uneven in their enforcement of domestic controls.[32] However, the United States has negotiated Memoranda of Understanding with

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[30]*Finding Common Ground*, 296.

[31]*Finding Common Ground*, 298.

[32]*Finding Common Ground*, 176.

Singapore and South Korea and satisfactory arrangements are in place with European neutrals such as Switzerland, Austria and Finland.[33] In 1988, the U.S. Omnibus Trade and Competitiveness Act eliminated requirements for export licenses for many items exported to such cooperating (5(k)) countries[34].

The best answer was probably better focus on fewer targets and products. In the early 1980s, the United States determined that China was not as much of a military threat as the Soviet Union and its Warsaw Pact allies.[35] In 1985, at U.S. initiative, COCOM introduced less restrictive technical parameters for review of items for export to the Peoples Republic of China (the "China Green Line"); this marked the first change to COCOM's proscribed country list since its inception.[36]

COCOM: Continued Fine Tuning

In contrast, the list of COCOM-proscribed goods faced pressure for change almost from COCOM's inception. The first effort to "streamline" the COCOM list was in 1954.[37] The most recent try at putting "higher fences around fewer goods" concluded in 1991.

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[33]*Finding Common Ground*, 104.

[34]Sumner Benson, "The Security Perspective on Export Control Policy in the 1990s," *Export Controls in Transition* 15.

[35]*Finding Common Ground*, 51.

[36]*Finding Common Ground*, 65.

[37]Heinz, 47.

In the latest round, industry hoped for more dramatic control reductions for computers and telecommunications equipment.[38] Reportedly, there was also pressure from the Europeans and Japanese for greater decontrols.[39] However, to meet U.S. concerns, the exercise produced relatively more moderate liberalization[40].

This latest "streamlining" exercise still reduced the list significantly. Agreement was also reached among COCOM countries to implement a common standard of enforcement. As a result, a license free zone for intra-COCOM trade will go into effect in 1992.

U.S. extraterritorial reach continues to cause friction within COCOM. However, the U.S. has changed some domestic legislation to help COCOM function more smoothly and to try to ensure that U.S. industry does not suffer unduly. No other COCOM member requires the same authorization for reexport from a COCOM or a TIC country that the U.S. demands.[41] However, the U.S. has raised the "de minimis" level for items containing U.S. components. Previously, the U.S. claimed jurisdiction over any item containing a U.S. part; in 1988 the level was changed to 25% or more U.S. production[42].

Despite intra-COCOM disputes, mood swings, and endless fine tuning, COCOM is usually judged a success. While differences have

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[38]"Export Controls: The Year in Review," *Export Control News* 18 December 1991, 3.

[39]Martin Hillenbrand, "Export Controls in the 1990s: a Diplomatic Perspective," *Export Controls in Transition*, 64.

[40]"Year in Review," *Export Control News*, 3.

[41]*Finding Common Ground*, 171.

[42]Freedenberg, 46.

been frequent, no one has stormed out (*a la* France in NATO) so the level of dispute may be judged to be below the Western standard for collective security.[43]

If the goal was to deny or delay Soviet acquisition of militarily relevant Western goods and technology and keep NATO ahead of the Warsaw Pact, COCOM helped maintain that lead[44]. If COCOM is ultimately undone by a man and a tank, at least the man will be on top of the tank and not inside.

COCOM: Is It an Answer?

COCOM's success may have sown the seeds of its eventual demise. As a battle cry, "no business as usual with Communists" loses its immediacy once the lines at the Moscow McDonald's exceed those at Lenin's tomb.

Certainly, COCOM – like many other Cold War institutions – must eventually redefine its mission and role. It is tempting to suggest COCOM might find a new post-Cold War role as an umbrella organization, pulling together divergent pieces of the existing proliferation net, such as the Missile Technology Control Regime and the Australian Group.

However, as Graham Allison argues in *Essence of Decision*, an organization's bias is to follow standard operating procedures when

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[43]Benson, 12.

[44]Gary K. Bertsch and Steven Elliott, "Introduction," *Export Controls in Transition*, 1.

facing a new problem. COCOM was never designed to be a supra-institution. Nor was it meant to be a non-proliferation regime.

Further, each of the existing varied attempts to handle a part of the problem has a sharp focus that would be lost if all the issues were rolled together. Finally, each existing group has not only a different target but a different membership. While all might benefit from expansion, individual memberships would have to remain focussed to ensure needed commonality of interest.

COCOM LESSONS: Extracts from the COCOM Experience

It is better to look to COCOM for lessons on how to handle those goods, services and technologies that existing regimes now miss; that is, to focus on COCOM's already established area of expertise in control of dual use technologies, which could be used to expand a country's capacity to produce and employ weapons of mass destruction. Here, the COCOM experience can certainly provide a number of lessons about how a COCOM-like mechanism might function as part of a wider North-South effort to control the spread of weapons of mass destruction.

Lesson One: Controllability

The first lesson, drawn by the National Academy of Sciences Panel on the Future Design and Implementation of U.S. National Security Export Controls is: apply export controls only to what is controllable.[45] The Panel identified elements that contributed to an item's export controllability as: 1) manufacture and/or sale by a modest number of suppliers whose actions can be controlled; 2) consumption or use by a modest number of consumers whose export actions can be controlled; and 3) individually traceable or not easily concealed or disguised.[46]

Elements contributing to end-use controllability included: 1) use or consumption by a modest number of entities; 2) use or consumption in an environment in which access can be limited and/or

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[45]*Finding Common Ground*, 162.

[46]*Finding Common Ground*, 162.

users identified; and 3) use or consumption by those with the authority, means and will to limit access.[47]

This finding has a number of implications for any effort to establish a mechanism for Third World dual use export controls. One is that it may be very hard to put together a reasonable list of controllable items. As Saddam Hussein demonstrated in Iraq, while the KGB was only interested in stealing the latest (and most limited) technology, many developing countries may find older, less sophisticated and more widely available technologies acceptable.

In fact, as the COCOM East-West list is "streamlined," export controls are already being removed from less sophisticated dual use items that are still sufficiently "high tech" to fuel the nonconventional and weapons programs in developing countries. One key problem already emerging is that Western countries may link other export controls to the COCOM list, (e.g., U.S. anti-terrorism legislation[48]). In the absence of replacement efforts to address North-South transfers issues directly, COCOM streamlining will narrow these "piggyback" lists, unintentionally expanding the scope for North-South sales of dual use militarily sensitive technology.

On the plus side, a North-South mechanism may be driven much more by pure military concerns rather than broader "no business as usual" objectives. If this is the case, it may be easier to

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[47]*Finding Common Ground*, 163.

[48]Personal interview, Frederick Becker, COCOM Affairs Officer, Department of State, European Bureau, Office of Regional Political-Economic Affairs, March 4, 1992.

maintain a more tightly focussed list of commodities, once the right technologies can be identified.

It may also be more difficult to enforce an acceptable system of end-use controls. Even developing country governments willing to comply with export requirements may not have the authority and means to ensure that items go to and remain at their intended destinations. The sheer magnitude of numbers of Third World destinations will add to the end-use control problem. With more sales to track in more (and more isolated) countries, temptations to divert will rise as the odds on financial rewards exceed those of retribution.

Unfortunately, the main focus of any COCOM-like mechanism to control North-South dual use technology may be on end-use controls. In most cases, Western and other sellers will have a strong interest in supporting the legitimate development objectives of potential LDC purchasers. To ensure adequate access to dual use technology needed for development, seller governments may have to focus more on verification of end use rather than on denial of initial sales.

Lesson Two: The Politics of Choice

COCOM's second lesson is that choices about proscribed destinations will be governed by political as well as military realities. Even faced with a clear potential for hostility from an identified superpower and its allies, the 17 COCOM countries were still not always singing from the same hymn book.

With a much more diffuse threat – or different national perceptions of threats – it may be even harder to reach consensus. In fact, it may be impossible to develop a common country list of proscribed destinations. One country's dangerous proliferator is likely to be another's long-time ally.

And, while everyone was willing to stand up and be counted as an anti-Communist, naming names of developing countries viewed as irresponsible may be a more sensitive question. Thus far, three countries, the United States, the United Kingdom and Germany, have published lists of countries of proliferation concern[49]. Of these, Germany's is the longest (55), followed by the U.S. (49) and Britain (33); only the U.S. list classifies the listed countries according to the type of proliferation threat.[50]. Others may eventually do so as well.

However, in putting together a list, it will always prove easier to express public alarm against proven aggressors (e.g., Iraq) than against countries that may represent the threat of long term escalation. Also, even a list put out by an individual country may not be as much of a challenge to developing country pride as a common list agreed upon primarily by developed countries or shepherded by the U.S. in a leadership role.

Finally, if and when a multilateral list is agreed upon, it is unlikely to show the same stability as the former Soviet empire.

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[49]"The View From Abroad." *Export Control News*, 30 Jan 1992, 11.

[50]"View," 11.

Revisions may be required frequently with the rise and fall of governments or because of new information received. Unfortunately, know-how, once transferred, may not be retrievable.

Lesson Three: Handling the Spread of Technology

COCOM's third lesson is that the United States – or even the developed West – no longer controls all the marbles. As noted, foreign availability of dual use technology has been an increasing problem for COCOM in recent years. And while some key technologies are still available only from a limited number of Western sources, it is unclear whether it is better to attempt to limit these alone or to undertake a more ambitious program.

Any attempt to expand restrictions beyond key dual use items produced only by Western countries will have to address the question of membership. Because there are no "neutrals" in the war against weapons of mass destruction, COCOM's two tier approach – membership versus cooperating country status – is less likely to be an option. To cover a broad range of high tech dual use technologies, the net will have to be cast widely to include as many sources as possible. This will make both group decision-making and control more difficult.

Lesson Four: What's Good for General Motors Will Matter

Finally, the COCOM experience has shown that the game will not be played in a commercial vacuum. Economic interests will have to be considered in any attempt to stem the flow of sensitive dual use

technology. Unfortunately, the "peace dividend" means more firms will be on the road, trying to find new clients for military and dual use technology as developed Western and Soviet markets decline.

Western governments have a military as well as economic interest in the success of these firms. In the absence of large domestic military spending, new foreign markets will be necessary to provide profits needed to keep production lines open and to fund research and development on next generation technology.

Some U.S. firms already estimate that their foreign sales must reach between 30% to 40% of current sales - twice the current average - to stay afloat[51]. That means the firms must be more competitive abroad. For savvy developing country buyers, that translates into more leverage for "offset" arrangements that provide for joint production and greater access to advanced technology[52].

The domestic industries of the 17 COCOM member countries chaffed under Cold War restraints driven by a relatively clear and present danger, particularly when issues of competitive "fairness" were raised. An effective North-South mechanism covering even a fairly narrow range of dual use technologies will affect the industries of a far larger number of countries. Both developed country and NIC firms will have to be won over in support of

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[51]Steven Pearlstein "Hard Sell for U.S. Arms; Weapons Makers Feel Same Competitive Pressures as other Global Industries'" *Washington Post*, 7 Apr 1991 final ed, H1.

[52]Pearlstein, H1.

policies aimed at pursuing more global and less immediate objectives. Those that do will be aware that there are far greater opportunities for evasion than under COCOM. It is likely that industries affected by the new regime will be even more vocal than those of COCOM countries in pressing their concerns.

Coda: The Game Will Have More Players

Recruitment into any export control mechanism that does not have universal (e.g., UN) membership will be a sensitive issue. The right of developing countries to access to technology has always been a key tenet of those attempting to promote a "New International Economic Order." While voices calling for free, unlimited technology transfer may fade as more countries accept, e.g., international commitments to protect intellectual property rights, the issue of technology's role in development will remain central to the North-South debate.

This does not mean that many developing countries do not have strong concerns over the uncontrolled (and expensive) escalation in capabilities to produce and use weapons of mass destruction. However, to be attracted to a multilateral program, these countries will seek assurances that any rules will not appear to be biased against legitimate developing country aspirations for economic progress. Further, they will have to believe the economic gains associated with controlling an escalating Third World "arms race" outweigh any perceived loss of independence or weakened national security.

Other LDCs may oppose any multilateral attempt to freeze the status of military "Haves" and "Have Nots." With national security and defense at stake, this list may not be limited to the Saddam Husseins of the world but could include countries the U.S. ranks as allies. The issue would become more politically charged if the West appeared willing to accept (or unable effectively to oppose) the spread of nuclear weapons, e.g., to Germany or Japan, but not outside the developed world.

To be effective, the net will have to include former COCOM targets, including republics of the former Soviet Union. This may eliminate COCOM itself from the running, although not a COCOM-like organization. It is certain to make developing a proscribed country list more difficult, particularly if Russia remains ambivalent about whether it wants to be a "Western" or EurAsian power.

WEIGHING COSTS AND BENEFITS: Is the Game Worth the Candle?

In sum, COCOM's history highlights the enormous potential difficulties associated with establishing an effective multilateral mechanism to restrict the flow of sensitive dual use technology to developing country destinations. And at best, it promises that a successful multilateral system will work about as well as COCOM has - that is, it will slow but not stop sensitive transfers.

As the price, the U.S. can expect to be embroiled in a frustrating, occasionally heated dialogue in a setting of ongoing friction among nations seeking to balance military and commercial interests and preserve or enhance national security.

However, that was also the price of COCOM. The United States chose to launch the COCOM initiative because it seemed an effective if not perfect way to meet a critical challenge. COCOM offered a step short of war to pursue both political and military objectives. For the same reason, a COCOM-like mechanism might slow the spread of the capability to produce and use weapons of mass destruction.

Alternative Costs May Be Higher

A COCOM-type mechanism may be less costly both politically and militarily than, for example, a "surgical strike" against a known unacceptable weapons production site. Such action is tempting in its simplicity but not perhaps in its longer term ramifications.

First, the surgical strike may be harder than it sounds. Both identifying the target and taking it out with the fewest possible civilian losses can be difficult. It will be increasingly

difficult as potential target countries develop countermeasures.

Second, to be an effective deterrent, the U.S. must be seen as willing and able to respond to every threat that arises in the future. While there may be sufficient domestic and international support for a strike against Iraq in the aftermath of the Gulf War, as targets expand – Pakistan, Brazil, Israel, China – both domestic and international consensus may be increasingly difficult to build.

Questions may also arise over time as to the appropriateness of continued U.S. unilateral decision-making in determining the world's military Haves and Have Nots. In the long run, it may be as difficult to predict the impact of interference in the balance of power among nations in a region as to predict the long term affects of interference in the balance of nature. In both cases, selective removal of predators may have unforeseen consequences.

Exploring the Option

Charges of U.S. tendencies toward unilateralism may also arise in efforts to create a multilateral COCOM-style regime for sensitive dual use technology not covered by other systems. In 1947, the U.S. was the world's creditor. Even then, America could not alone write the rules for the COCOM system. Now, with less leverage, the U.S. will need more skill, patience, and perhaps more willingness to compromise to win over the divergent players needed to make a North-South export control mechanism effective.

Here, some non-proliferation regimes may provide a model. Australia took the lead on chemical weapons – in response to U.S.

concern over the issue. The G-7 countries formed the nucleus of the MTCR, which then grew to a larger membership. Working with and through our allies, the U.S. might shape although not dictate the terms of an acceptable COCOM-style regime.

The United States should explore these issues bilaterally with its allies, with the European Community, and in multilateral fora such as the United Nations. By drawing on lessons of past cooperation, it may be possible to avoid past pitfalls and build a stronger, broader and more effective structure for the future.

It Still May not Work

At worst, the forces for self preservation and aggrandizement at work in the world may be too strong to stop the spread of the production and potential use of weapons of mass destruction. Or the cost of compromise may seem too high to some of the many countries (including the United States) that must come together to create an effective regime to control the dual use technologies necessary to support such systems.

At best, even a COCOM-type regime will only buy time until a better solution comes along – time worth having only if there is a chance to find a solution that addresses the underlying causes of the problem and not just the symptoms.

The Road to Global Stability

The United States does have a long term answer. However, it is one that will take time to achieve. Only the spread of

democracy and enhanced regional cooperation can raise the level of global stability.

Democracies probably don't have a history of fighting one another primarily because there haven't been enough of them around for a long enough time. However, they are generally more open societies with relatively greater public access to information.

They may also be less belligerent and more prone to international cooperation. This has been the case in the Southern Cone where, after years as nuclear holdouts, elected governments in Argentina and Brazil recently promised to obey the rules of both the IAEA and the regional agreement on a nuclear free zone, the Treaty of Tlatelolco[53]. In December, 1991, the two countries signed an agreement opening their nuclear facilities to mutual inspection, viewed as a key step in curbing proliferation.[54]

Some day, through greater regional economic and political integration among democratically elected governments, the lion and the lamb may finally lie down together. Although, even then, the lamb will probably continue to want inspection rights of any new leonine dental work.

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[53]"The Latin Safety Network," *Economist* 14 March 1992, 47.

[54]Michael Wise, "Argentina, Brazil Sign Nuclear Accord," *Washington Post*, 14 December, 1991, Final ed. A19.

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